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Examination	Requested
Title of Invention	The light weight composite panel structure and manufacturing method thereof.



Abstract

The invention relates to the light weight composite panel structure for construction in and out wall and manufacturing method thereof. And the compression, and the light weight composite panel structure and the manufacturing method thereof which with breaking away from the form enhances the reduction, which is timely soundproof, and insulation and gun out hole definition convenience and profitability the styrofoam mixing light concrete of the semi solid-state is welded in the cellulose fiber cement board to the acrylic resin mastic cement it is conveniently used in apartment or the building construction as in and out wall material the light weight composite panel structure which it unitizes it breaks away from the form the mold is compressed the paste cellulose fiber cement board is on placed on the top the paste styrofoam mixing light concrete is charged in the cellulose fiber cement board.



Representative Drawing(s)

Fig. 1



Description

[Title of invention]

The light weight composite panel structure and manufacturing method thereof.

[The simple description of the drawing]

The cross-sectional view which the first drawing shows the light weight composite panel structure about the first working example of the present invention. And figure 2 is a cross-sectional view, which the cross-sectional view, and figure the third show the light weight composite panel structure about the third preferred embodiment of the present invention the cross-sectional view which figure the fourth shows the light weight composite panel structure about the fourth preferred embodiment of the present invention, and the cross-sectional view which figure the fifth shows the light weight composite panel structure about the fifth preferred embodiment of the present invention showing the light weight composite panel structure about the second preferred embodiment of the present invention.

This content did not gather the technical content since the main part disclosure gun.



#### Scope of Claims

##### Claim 1 :

The light weight composite panel structure for \*\*\* in and out wall wherein as to the light weight composite panel structure for construction in and out wall, the styrofoam mixing light concrete (3) of the semi solid-state is welded in the cellulose fiber cement board (1) to the acrylic resin mastic cement (2) charge; and it breaks away from the form and the acrylic resin mastic cement (2') is combined at the same time the compression to package and after placing on the paste cellulose fiber cement board (1') on the top it becomes.

##### Claim 2 :

The light weight composite panel structure for construction in and out wall wherein as to the first claim, the styrofoam mixing light concrete (3) is the styrofoam mixing light concrete of the semi solid-state where 420kg / m<sup>3</sup> and the mole cement ratio is 40% : 60% and the weight percent of the cement / styrofoam particle is composed among the combination ratio of the component mix ratio of 19/1.

##### Claim 3 :

The light weight composite panel structure for construction in and out wall wherein as to the first claim, the apparent specific gravity of the styrofoam mixing light concrete (3) is 350-380kg / m<sup>3</sup>.

##### Claim 4 :

The light weight composite panel structure wherein as to the first claim, the styrofoam mixing light concrete (3) is to stickig to the grinds next.

##### Claim 5 :

The light weight composite panel structure wherein as to the first claim, the styrofoam (4) is to stickig to the cellulose fiber cement board (1) and the styrofoam mixing light concrete (3) is welded.

##### Claim 6 :

The manufacturing method of the light weight composite panel structure for construction in and out wall wherein it is composed of the step of pasting the acrylic resin mastic cement (2) in the cellulose fiber cement board

(1) as to the light weight composite panel structure, for construction in and out wall, and step of placing on the paste cellulose fiber cement board (1') on the top of the styrofoam mixing light concrete (3), and step of placing on the paste cellulose fiber cement board (1') on the top of the styrofoam mixing light concrete (3) is adhered in \*\*\* fiber cement board (1) the step that it charges; and it welds., and the acrylic resin mastic cement (2') the styrofoam mixing light concrete (3) in the upper part, and the step of breaking away from the form the compression the styrofoam mixing light concrete (3) among the cellulose fiber cement board (1).

Claim 7 :

The light weight composite panel structure for construction in and out wall wherein as to claim 6, the styrofoam mixing light concrete (3) is the styrofoam mixing light concrete mixture of the semi solid-state where  $420\text{kg} / \text{m}^3$  and the mole cement ratio is 40% : 60% and the weight percent of the cement / styrofoam particle is composed among the combination ratio of the component mix ratio of 19/1.

Claim 8 :

The manufacturing method of the light weight composite panel structure for construction in and out wall wherein as to claim 6, the apparent specific gravity of the styrofoam mixing light concrete (3) is  $350\text{--}380\text{kg} / \text{m}^3$ .

※ list of reference: it discloses with the initial application contents.



Drawings

Fig. 1

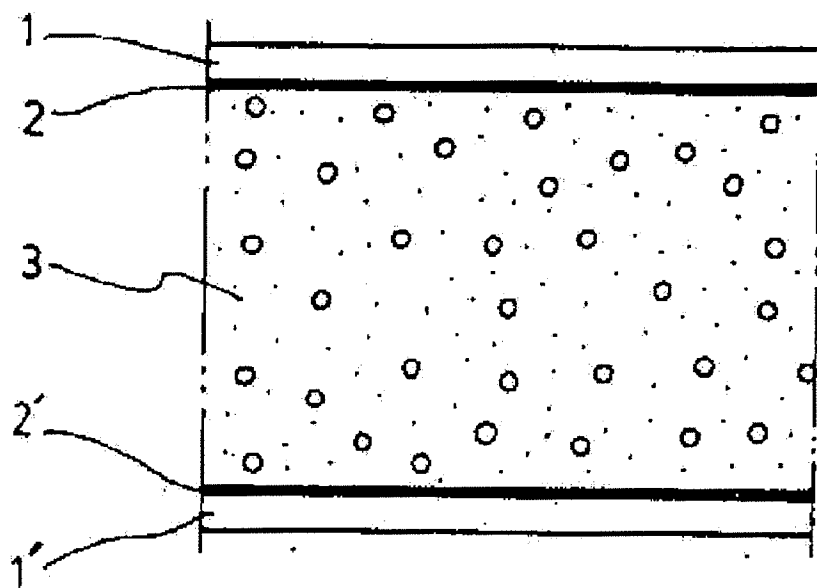


Fig. 2

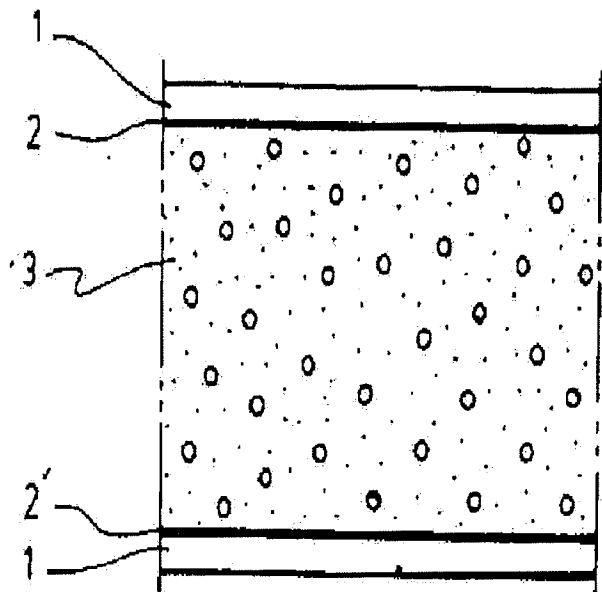


Fig. 3

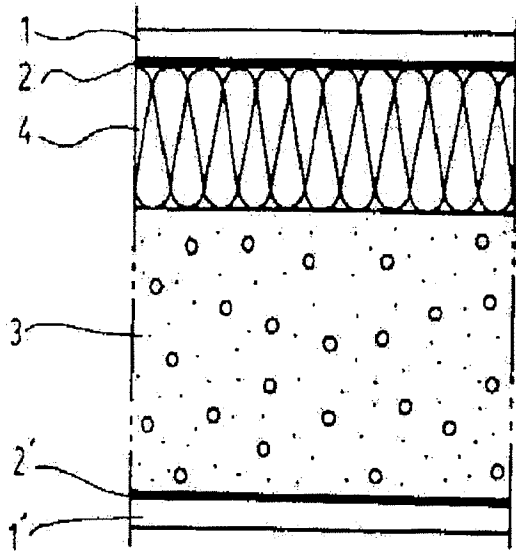


Fig. 4

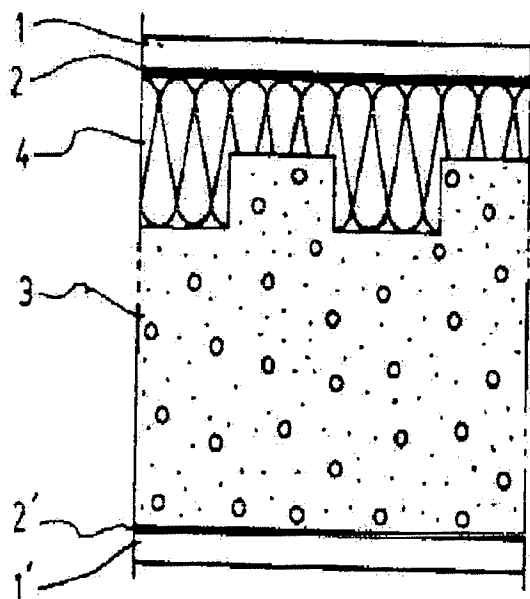
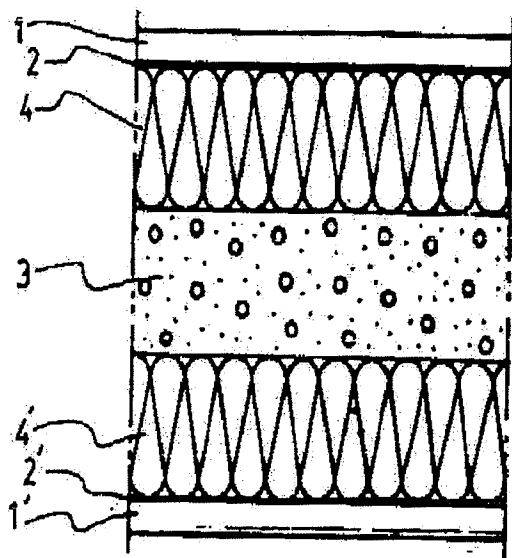


Fig. 5





## (19)대한민국특허청(KR)공개특허공보(A)

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출원일자	1992년09월29일
공개번호	특1994-0006957
공개일자	1994년04월26일
대리인	조철현
발명자	이익우
	김인숙
	정성진
출원인	효성드라이비트 주식회사효성범
심사청구	있음
발명의명칭	경량복합패널구조체 및 그 제조방법



### 요약

본 발명은 건축내외벽용 경량복합패널구조체 및 그 제조방법에 관한 것으로서, 셀룰로즈화이버시멘트보드에 아크릴수지시멘트 접착제를 바른 다은 스티로폴 혼합경량콘크리트를 충전시키고 아크릴수지시멘트 접착제를 바른 셀룰로즈화이버시멘트보드를 상부에 얹은 후 상기 금형을 압축, 탈형시켜 일체화한 경량복합패널구조체로서, 아파트나 빌딩 건축시 내외벽재로서 편리하게 사용되고 셀룰로즈화이버시멘트 보드에 반고체 상태의 스티로폴 혼합경량콘크리트를 아크릴수지시멘트 접착제로 접합하여 압축, 탈형시킨 것으로 방음, 단열 및 건축공정의 시간적인 단축과 편리성 및 경제성을 높인 경량복합패널구조체 및 그 제조방법.



### 대표도

도. 1



### 명세서

#### [발명의 명칭]

경량복합패널구조체 및 그 제조방법

#### [도면의 간단한 설명]

제1도는 본 발명의 제1실시예에 관한 경량복합패널구조체를 나타낸 단면도,

제2도는 본 발명의 제2실시예에 관한 경량복합패널구조체를 나타낸 단면도,  
제3도는 본 발명의 제3실시예에 관한 경량복합패널구조체를 나타낸 단면도,  
제4도는 본 발명의 제4실시예에 관한 경량복합패널구조체를 나타낸 단면도,  
제5도는 본 발명의 제5실시예에 관한 경량복합패널구조체를 나타낸 단면도이다.

본 내용은 요부공개 건이므로 전문 내용을 수록하지 않았음



#### 청구의 범위

##### 청구항 1:

건축내외벽용 경량복합패널구조체에 있어서, 셀룰로즈화이버시멘트보드(1)에 아크릴수지시멘트접착제(2)로 반고체 상태의 스티로폴혼합경량콘크리트(3)를 충전, 접합시키고, 상기 아크릴수지시멘트 접착제(2')를 바른 셀룰로즈화이버시멘트보드(1')를 상부에 얹은 다음 동시에 압축, 탈형시켜 일체화로 결합시켜서 된 것을 특징으로 하는 건축내외벽용 경량복합패널 구조체.

##### 청구항 2:

제1항에 있어서, 상기 스티로폴 혼합경량콘크리트(3)가 배합비중  $420\text{kg}/\text{m}^3$ 이고 물시멘트비가 40% : 60%이고 시멘트/스티로폴 입자의 무게비가 19/1의 성분 배합비로 구성되는 반고체 상태의 스티로폴 혼합경량콘크리트인 것을 특징으로 하는 건축 내외벽용 경량복합패널구조체.

##### 청구항 3:

제1항에 있어서, 상기 스티로폴 혼합경량콘크리트(3)의 겉보기 비중이  $350\text{--}380\text{kg}/\text{m}^3$ 인 것을 특징으로 하는 건축내외벽용 경량복합패널 구조체.

##### 청구항 4:

제1항에 있어서, 상기 셀룰로즈화이버 시멘트보드(1')와 아크릴수지 시멘트접착제(2')를 스티로폴혼합경량콘크리트(3)를 연마시키 다음에 접착한 것을 특징으로 하는 경량복합패널 구조체.

##### 청구항 5:

제1항에 있어서, 상기 셀룰로이드화이버시멘트보드(1)에 스티로폴(4)을 접착하여 스티로폴 혼합경량콘크리트(3)를 접합한 것을 특징으로 하는 경량복합패널 구조체.

##### 청구항 6:

건축내외벽용 경량복합패널구조체에 있어서, 셀룰로즈화이버시멘트보드(1)에 아크릴수지시멘트접착제(2)를 바르는 단계와, 그 위에 스티로폴혼합경량콘크리트 (3)를 충전, 접합시키는 단계, 아크릴수지시멘트접착제(2')를 바른 셀룰로즈화이버 시멘트보드(1')를 셀룰로즈화이버시멘트보드(1)에 접착된 스티로폴혼합경량콘크리트 (3)의 상부에 얹는 단계, 상기 셀룰로즈화이버 시멘트보드(1)사이에 스티로폴혼합경량콘크리트(3)를 압축 탈형 시키는 단계로 구성된 것을 특징으로 하는 건축내외벽용 경량복합패널구조체의 제조방법.

##### 청구항 7:

제6항에 있어서, 상기 스티로폴 혼합경량콘크리트(3)가 배합비중  $420\text{kg}/\text{m}^3$ 이고 물시멘트비가 40% : 60%이고 시멘트/스티로폴 입자의 무게비가 19/1의 성분 배합비로 구성되는 반고체 상태의 스티로폴 혼합경량콘크리트혼합물인 것을 특징으로 하는 건축내외벽용 경량복합패널 구조체.

청구항 8:

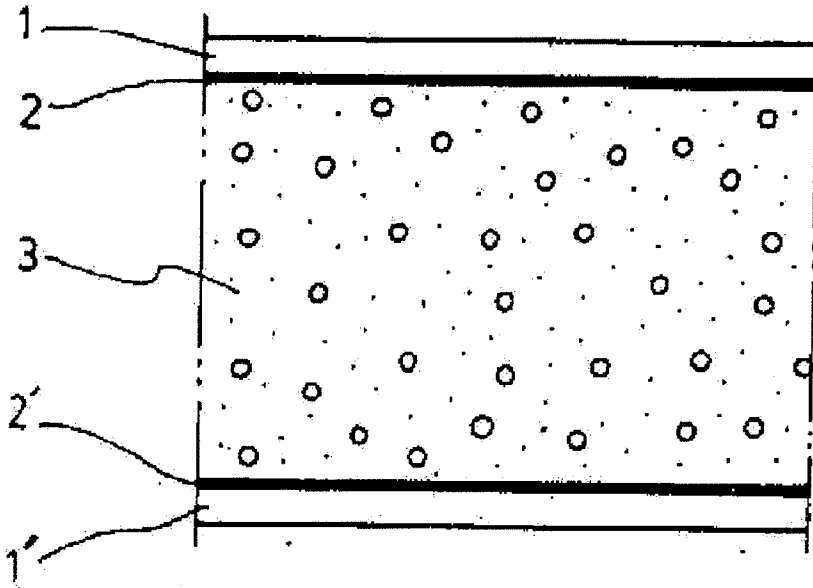
제6항에 있어서, 상기 스티로폴 혼합경량콘크리트(3)의 겉보기 비중이  $350\sim 380\text{kg/m}^3$ 인 것을 특징으로 하는 건축내외 벽용 경량복합패널 구조체의 제조방법.

※ 참고사항 : 최초출원 내용에 의하여 공개하는 것임.

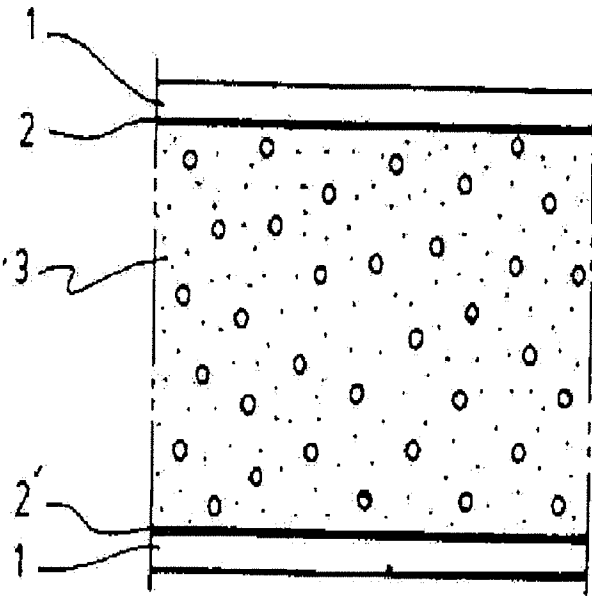


도면

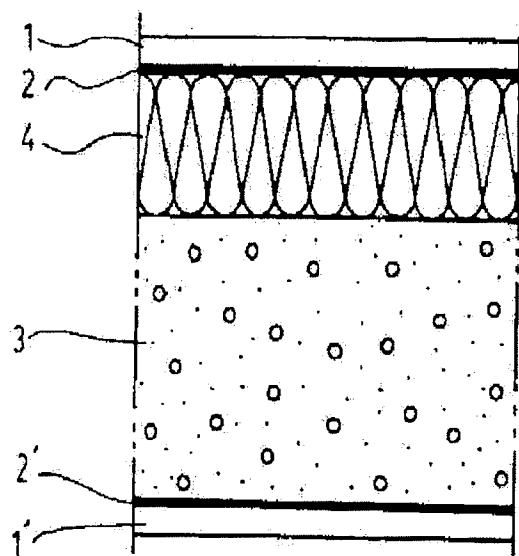
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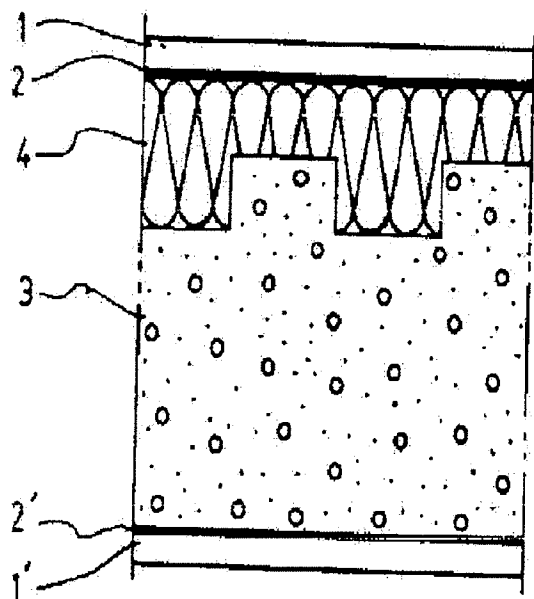
도면 2



도면 3



도면 4



도면 5

